CLAIMS

1. An adhesive containing components A and B in which

a) component A contains at least one polyester with a molecular weight (M_n) of at least 8000 and has a total enthalpy of fusion of at most 20 mJ/mg

and

b) component B contains at least one polyester with a molecular weight (M_n) of less than 8000 and, more particularly, in the range from 1000 to 6500 and a glass transition temperature of at most 60°C and, more particularly, in the range from -25 to 40°C,

the adhesive having a melt viscosity of 500 to 25,000 mPas (Brookfield RVT DVII, 140°C, spindle 27) and a softening point of 70 to 100°C (ASTM E28).

2. An adhesive as claimed in claim 1, characterized in that component A contains a polyester synthesized from at least a first and a second acid component and at least a first alcohol component.

3. An adhesive as claimed in claim 1 or 2, characterized in that component B contains a polyester synthesized from at least a first and a second acid component and at least a first alcohol component.

4. An adhesive as claimed in claim 2 or 3, characterized in that the polyester is synthesized in such a way that it contains

d) an acid selected from o-phthalic acid, isophthalic or terephthalic acid as a first acid component,

e) an acid selected from adipic acid and sebacic acid as a second acid component,

f) ethylene glycol, neopentyl glycol, 1,2-propylene glycol, 1,3-propylene glycol, the isomeric butylene glycols, pentane diols and hexane diols, dianhydrosorbitol, diethylene glycol, triethylene glycol, pure or mixed ethers thereof or reaction products thereof with C_{1-4} alkylene oxides as a first alcohol component.

5. An adhesive as claimed in any of claims 1 to 4, characterized in that component B contains an amorphous polyester with a molecular weight (M_n) of 1500 to 4000, a glass transition temperature T_g of 5 to 20°C and a viscosity of 5,000 to 25,000 mPas (Brookfield CAP 2000), 90°C, cone 6, 50 r.p.m., measuring time 25 s) as component B1.

6. An adhesive as claimed in any of claims 1 to 4, characterized in that component B contains an amorphous polyester with a molecular weight (M_n) of 400 to 4000 and a glass transition temperature T_g of -40 to -15°C as component B2.

7. An adhesive as claimed in any of claims 1 to 4, characterized in that component B contains an amorphous polyester with a molecular weight (M_n) of less than 500 and a glass transition temperature T_g below -40°C as component B3.

8. An adhesive as claimed in any of claims 1 to 7, characterized in that component B contains a mixture of at least two polyesters with different glass transition temperatures or different molecular weights (M_n) or both.

9. An adhesive as claimed in claim 8, characterized in that component B contains a mixture of at least two of components B1, B2 and B3.

10. An adhesive as claimed in any of claims 1 to 9, characterized in that it contains 30 to 95% by weight of component A and 5 to 75% by weight of component B and 0 to 45% by weight of additives.

11. An adhesive as claimed in any of claims 1 to 10, characterized in that the adhesive is biodegradable, preferably in 90 days, according to DIN 54900, Part 2 (Draft).

12. An adhesive as claimed in any of claims 1 to 11, characterized in that the adhesive has a contact angle of 20 to 50°.

13. A process for the production of a composite material of at least two identical or different materials, characterized in that an adhesive containing components A and B, in which

a) component A contains an amorphous polyester with a molecular weight

(M_n) of at least 8000, component A having a total enthalpy of fusion of at most 20 mJ/mg

and

b) component B contains an amorphous polyester with a molecular weight (M_n) of less than 8000 and, more particularly, in the range from 1000 to 6500 and a glass transition temperature of at most 60°C and, more particularly, in the range from -10 to 40°C,

the adhesive having a melt viscosity of 500 to 25,000 mPas (Brookfield RVT DVII, 140°C, spindle 27) and a softening point of 70 to 100°C (ASTM E28).

14. A process as claimed in claim 13, characterized in that at least one of the at least two like or different materials is a polyolefin.

15. A process as claimed in claim 13 or 14, characterized in that at least one of the at least two like or different materials is a nonwoven.

16. The use of an adhesive as claimed in any of claims 1 to 12 for making a composite material of two like or different materials.

17. The use claimed in claim 16 for making hygiene articles, more particularly with a dermatologically compatible coating of the top sheet.

18. A composite material made with the adhesive claimed in any of claims 1 to 12 or made by the process claimed in any of claims 13 to 15.

Add B5

Add C4